

AMENDMENT TO THE CLAIMS

Please replace the pending claims with the following claim listing:

Claims:

1. (Currently Amended) A method ~~[[,]]~~ comprising the steps of:
receiving ~~billing information~~ call detail data associated with a subscriber of a telecommunication service under a current rate plan;
processing the ~~subscriber related billing information~~ call detail data to produce ~~organized data in~~ a calling profile record summarizing call usage information of the subscriber, wherein the calling profile record contains less data than the call detail data and is organized with parameters comprising:
where calls are made and received;
when calls are made and received; and
what types of calls are made and received;
analyzing the parameters of the calling profile record in relation to the current rate plan;
analyzing the ~~processed data~~ parameters of the calling profile record in relation to a plurality of other rate plans of a plurality of telecommunication service providers;
determining at least one proposed rate plan that would save the subscriber telecommunication costs relative to the current rate plan; and
producing a report of the at least one proposed rate plan to enable selection of a ~~best~~ an alternative telecommunication service provider and a ~~best~~ rate plan;
wherein the where calls are made and received parameter is defined by a home category or a roam category;

wherein the when calls are made and received parameter is defined by peak, off peak, or weekend categories; and

wherein the what types of calls are made and received parameter is defined by local, intrastate toll, or interstate toll categories.

2. (Canceled)

3. (Currently Amended) The method of claim [[2]] 1, wherein the home category is selected for the where calls are made and received parameter if there is no originating city ~~for the calls~~.

4. (Currently Amended) The method of claim [[2]] 1, wherein the home category is selected for the where calls are made and received parameter if a local access transport area (LATA) number of an originating city or originating state is defined by a LATA number of a mobile identification number.

5. (Currently Amended) The method of claim [[2]] 1, wherein the home category further comprises ~~categories selected from the group comprising:~~

a home zip code;

a corporate zip code; and

at least one alternate zip code.

6. (Currently Amended) The method of claim 1, wherein the when calls are made and received parameter further comprises ~~categories selected from the group~~ comprising a time of day parameter and a day of week parameter.

7. (Canceled)

8. (Currently Amended) The method of claim ~~[[7]]~~ 6, wherein the peak category is selected for the when calls are made and received parameter if ~~a call date~~ the day of the week identification parameter is not between a weekend start day of the week and a weekend end day of the week ~~[[,]]~~ and the time of day parameter is placed between weekday peak start and weekday peak end times.

9. (Currently Amended) The method of claim ~~[[7]]~~ 6, wherein the off peak category is selected for the when calls are made and received parameter if ~~a call date~~ the day of the week identification parameter is not between a weekend start day of the week and a weekend end day of the week ~~[[,]]~~ and the time of day parameter is not placed between weekday peak start and weekday peak end times.

10. (Currently Amended) The method of claim ~~[[7]]~~ 6, wherein the weekend category is selected for the when calls are made and received parameter if ~~a call date~~ the time of day and day of the week parameters ~~identification is the weekend start day of the week and is made~~ are after a weekday peak end time on a weekend start day of the week and before a weekday peak start time on a weekend end day of the week.

11-14. (Canceled)

15. (Currently Amended) The method of claim [[14]] 1, wherein the local category is selected for the what types of calls are made and received parameter if a called city is an incoming call city.

16. (Currently Amended) The method of claim [[14]] 1, wherein the local category is selected for the what types of calls are made and received parameter if a called city is null.

17. (Currently Amended) The method of claim [[14]] 1, wherein the local category is selected for the what types of calls are made and received parameter if a called number is null.

18. (Currently Amended) The method of claim [[14]] 1, wherein the local category is selected for the what types of calls are made and received parameter if a mobile identification number LATA number is a destination number LATA number.

19. (Currently Amended) The method of claim [[13]] 1, wherein ~~the~~ one of the intrastate toll category or interstate toll category is selected if the local category is not selected.

20. (Currently Amended) The method of claim [[14]] 1, wherein the intrastate toll category is selected for the what types of calls are made and received parameter if a mobile identification number LATA number state is a destination number LATA number state.

21. (Currently Amended) The method of claim [[14]] 1, wherein the interstate toll category is selected for the what types of calls are made and received parameter if the local category and the intrastate toll category are not selected.

22. (Currently Amended) The method of claim 1, wherein ~~the step of~~ analyzing the ~~processed data~~ parameters of the calling profile record further comprises evaluating the calling profile record ~~of the subscriber~~ in order to determine if the current rate plan is cost effective for the subscriber.

23. (Currently Amended) A system [[,]] comprising:
means for receiving ~~subscriber related billing information~~ call detail data associated with a subscriber of a telecommunication service under a current rate plan;
means for processing the ~~subscriber related billing information~~ call detail data to produce ~~organized data in~~ a calling profile record in a size-reduced format summarizing the call usage history of the subscriber, wherein the calling profile record is organized with parameters ~~selected from the group consisting of~~ comprising:

where calls are made and received;

when calls are made and received; and

what types of calls are made and received;
the means for processing being communicatively coupled to the means for receiving
~~billing information~~;
means for analyzing the ~~processed billing information~~ parameters of the calling
profile record in relation to the current rate plan and a plurality of other rate plans of a
plurality of telecommunication service providers, the means for analyzing being
communicatively coupled to the means for processing and the means for receiving;
means for determining at least one proposed rate plan that would save the
subscriber telecommunication costs relative to the current rate plan, the means for
determining being communicatively coupled to the means for analyzing, the means for
processing, and the means for receiving; and
means for producing a report of the at least one proposed rate plan to enable
selection of ~~a best~~ an alternative telecommunication service provider and ~~a best~~ rate plan,
the means for producing being communicatively coupled to the means for determining,
the means for analyzing, the means for processing, and the means for receiving.

24. (Currently Amended) The system of claim 23, wherein the where calls are
made and received parameter is ~~selected from the group consisting of~~ defined by home
categories ~~and or~~ or roam categories.

25. (Currently Amended) The system of claim 23, wherein the when calls are
made and received parameter is ~~selected from the group comprising~~ comprises a time of
day parameter and a day of week parameter.

26. (Currently Amended) The system of claim 23, wherein the what types of calls are made and received parameter is ~~selected from the group comprising~~ defined as local ~~and or~~ toll.

27. (Currently Amended) The system of claim 23, wherein the what types of calls are made and received parameter ~~comprises the categories~~ is defined as local, intrastate toll, ~~and or~~ interstate toll.

28. (Currently Amended) The system of claim 23, wherein the means for analyzing ~~the processed data~~ further comprises means for evaluating the calling profile record ~~records of the subscriber~~ in order to determine if the current rate plan is cost effective for the subscriber.

29. (Currently Amended) A system [[,]] comprising:
~~at least one~~ a transceiver configured to receive ~~billing information~~ call detail data associated with a subscriber of a telecommunication service under a current rate plan ~~and to transmit a report;~~
a storage unit configured to store the ~~billing information~~ call detail data, wherein the storage unit is communicatively coupled to the transceiver;
a memory comprising software, wherein the memory is communicatively coupled to the transceiver and the storage unit; and

a processor, communicatively coupled to the transceiver, storage unit, and memory, configured by the software to:

process the ~~subscriber related billing information~~ call detail data to produce ~~organized data~~ in a calling profile record having a reduced data size with respect to the call detail data, the calling profile record summarizing the call usage information of the subscriber, wherein the calling profile record is organized with parameters ~~selected from the group consisting of~~ comprising where calls are made and received, when calls are made and received, and what types of calls are made and received;

analyze the ~~processed billing information~~ parameters of the calling profile record in relation to the current rate plan and a plurality of other rate plans offered by a plurality of telecommunication service providers;

determine whether or not one or more ~~proposed other~~ rate plans that would save the subscriber telecommunication costs relative to the current rate plan; and

produce the a report of the one or more proposed rate plans to enable selection of a best telecommunication service provider and a best rate plan; wherein the transceiver is further configured to transmit the report.

30. (Currently Amended) A computer readable medium having a computer program stored thereon, the computer readable medium comprising:

logic configured to receive ~~billing information~~ call detail data associated with a subscriber of a telecommunication service under a current rate plan;

logic configured to store the ~~billing information~~ call detail data;

logic configured to process the ~~subscriber related billing information~~ call detail data to produce ~~organized data in~~ a calling profile record having a data format that is simpler to process than the call detail data, wherein the calling profile record defines the call usage information of the subscriber and is organized with parameters ~~selected from the group consisting of~~ comprising where calls are made and received, when calls are made and received, and what types of calls are made and received;

logic configured to analyze the ~~processed billing information~~ parameters of the calling profile record in relation to the current rate plan and a plurality of other rate plans ~~of a plurality of telecommunication service providers~~;

logic configured to determine at least one proposed rate plan that would save the subscriber telecommunication costs relative to the current rate plan; and

logic configured to produce a report of the at least one proposed rate plan to enable selection of ~~a best telecommunication service provider and a best~~ an alternative rate plan.

31. (Currently Amended) A system [[,]] comprising:

a storage unit configured to store ~~billing information~~ call detail data associated with a subscriber of a telecommunication service under a current rate plan;

a memory comprising software, wherein the memory is communicatively coupled to the storage unit; and

a processor, communicatively coupled to the storage unit and memory, configured by the software to:

process the ~~subscriber related billing information~~ call detail data to produce organized, size-reduced data in a calling profile record, wherein the calling profile record ~~is organized with~~ comprises parameters that define the call usage history of the subscriber, each parameter selected from the group consisting of where calls are made and received, when calls are made and received, and what types of calls are made and received;

analyze the ~~processed billing information~~ calling profile record in relation to the current rate plan and a plurality of other available rate plans ~~of a plurality of telecommunication service providers~~;

compare the cost of the current rate plan with the plurality of other available rate plans to determine at least one proposed rate plan that would save the subscriber telecommunication costs relative to the current rate plan; and

produce a report of the at least one proposed rate plan to enable selection of ~~a best telecommunication service provider and a best~~ an alternative rate plan.

32. (Currently Amended) The system of claim 29, wherein the where calls are made and received parameter is ~~selected from the group consisting of~~ defined by home categories ~~and~~ or roam categories.

33. (Currently Amended) The system of claim 29, wherein the when calls are made and received parameter is ~~selected from the group consisting of~~ comprises a time of day parameter and a day of week parameter.

34. (Currently Amended) The system of claim 29, wherein the what types of calls are made and received parameter is ~~selected from the group consisting of~~ defined as local ~~and or~~ toll.

35. (Currently Amended) The system of claim 29, wherein the what types of calls are made and received parameter is ~~selected from the group consisting of~~ defined as local, intrastate toll, ~~and or~~ interstate toll.

36. (Currently Amended) The system of claim 29, wherein the processor is further configured by the software to evaluate a ~~plurality of~~ the calling profile record ~~records of the subscriber~~ in order to determine if the current rate plan is cost effective for the subscriber.

37. (Currently Amended) The computer readable medium of claim 30, wherein the where calls are made and received parameter is ~~selected from the group consisting of home categories and roam categories~~ defined by a home category or a roam category.

38. (Currently Amended) The computer readable medium of claim 30, wherein the when calls are made and received parameter is ~~selected from the group consisting of~~ comprises a time of day parameter and a day of week parameter.

39. (Currently Amended) The computer readable medium of claim 30, wherein the what types of calls are made and received parameter is ~~selected from the group consisting of~~ defined by local and toll categories.

40. (Currently Amended) The computer readable medium of claim 30, wherein the what types of calls are made and received parameter is ~~selected from the group consisting of~~ defined by local, intrastate toll, ~~and or~~ interstate toll categories.

41. (Currently Amended) The computer readable medium of claim 30, wherein the logic configured to process the ~~billing information~~ call detail data comprises logic configured to ~~evaluate a plurality of calling profile records of the subscriber in order~~ to determine if the current rate plan is cost effective for the subscriber.

42. (Currently Amended) The system of claim 31, wherein the where calls are made and received parameter is ~~selected from the group consisting of~~ defined by home categories ~~and or~~ roam categories.

43. (Currently Amended) The system of claim 31, wherein the when calls are made and received parameter is ~~selected from the group consisting of~~ comprises time of day and day of week parameters.

44. (Currently Amended) The system of claim 31, wherein the what types of calls are made and received parameter is ~~selected from the group consisting of~~ defined as local ~~and~~ or toll.

45. (Currently Amended) The system of claim 31, wherein the what types of calls are made and received parameter is ~~selected from the group consisting of~~ defined as local, intrastate toll, ~~and~~ or interstate toll.

46. (Currently Amended) The system of claim 31, wherein the processor is further configured by the software to ~~evaluate a plurality of calling profile records of the subscriber in order~~ to determine if the current rate plan is cost effective for the subscriber.

47. (New) The method of claim 1, wherein analyzing the parameters of the calling profile record in relation to a plurality of other rate plans further comprises:
determining the other rate plans based on the availability of rate plans offered by the telecommunication service providers in the subscriber's zip code.

48. (New) The method of claim 1, wherein processing the call detail data to produce a calling profile record further comprises:
processing originating_city parameters and originating_state parameters in the call detail data to produce zip code parameters in the calling profile record.

49. (New) The method of claim 48, wherein processing the call detail data to produce the calling profile record further comprises:

grouping the zip code parameters according to zip codes;

writing the zip codes into zip code fields in a descending order based on the number of service usage minutes for each zip code; and

writing the percentage of total minutes for each zip code into zip code percentage fields.

50. (New) The method of claim 49, wherein processing the call detail data to produce the calling profile record further comprises:

writing the zip code with the highest percentage into a first zip code field; and

if the number of remaining zip codes is greater than the number of available zip code fields, then grouping the zip codes starting with the same digits into the remaining zip code fields.

51. (New) The method of claim 49, wherein the zip code fields comprise a home zip code field, a corporate zip code field, and four alternate zip code fields.

52. (New) The method of claim 1, wherein analyzing the parameters of the calling profile record further comprises:

using a weighting algorithm that gives greater relevance to data received during more recent billing periods.

53. (New) The method of claim 52, wherein the weighting algorithm is defined by a weighting factor equal to $n + e^{(1-p)}$, where n is greater than or equal to zero and p is the number of billing periods looking back in time in which $p = 1$ for the most recent billing period.

54. (New) The method of claim 1, wherein analyzing the parameters of the calling profile record further comprises:

using a standard deviation measure to assess the suitability of a data set to the total data array; and

excluding unsuitable data sets.

55. (New) The method of claim 54, wherein excluding unsuitable data sets comprises excluding data sets outside a 1σ deviation.

56. (New) The method of claim 54, wherein analyzing the parameters of the calling profile record further comprises:

perturbing the parameters of the calling profile record by 1σ deviation in a positive and negative fashion to determine the suitability of the data sets.

57. (New) The system of claim 23, wherein the analyzing means determines the other rate plans based on the availability of the rate plans offered by the telecommunication service providers in the subscriber's zip code.

58. (New) The system of claim 23, wherein the processing means is further configured to process `originating_city` parameters and `originating_state` parameters in the call detail data to produce zip code parameters in the calling profile record.

59. (New) The system of claim 58, wherein the processing means further comprises:

means for grouping the zip code parameters according to zip codes; and

means for writing the zip codes into zip code fields in a descending order based on the service usage minutes for each zip code and for writing the percentage of total minutes for each zip code into zip code percentage fields.

60. (New) The system of claim 59, wherein the writing means writes the zip code with the highest percentage into a first zip code field, and groups the zip codes starting with the same digits into the remaining zip code fields when there are more zip codes than remaining zip code fields.

61. (New) The system of claim 60, wherein the zip code fields comprise a home zip code, a corporate zip code, and a plurality of alternate zip codes.

62. (New) The system of claim 23, wherein the analyzing means utilizes a weighting algorithm that gives greater weight to data from more recent months.

63. (New) The system of claim 62, wherein the weighting algorithm is defined by a weighting factor equal to $n + e^{(1-p)}$, where n is greater than or equal to zero and p is the number of billing periods looking back in time in which $p = 1$ for the most recent billing period.

64. (New) The system of claim 23, wherein the analyzing means further comprises:

means for measuring the standard deviation of the parameters of the calling profile record to assess the suitability of a data set to the total data array; and

means for excluding unsuitable data sets from the total data array.

65. (New) The system of claim 64, wherein the analyzing means excludes data sets outside a 1σ deviation.

66. (New) The system of claim 64, wherein the measuring means further comprises means for altering the parameters of the calling profile record by 1σ deviation in a positive and negative fashion to assess the suitability of the data sets.

67. (New) The system of claim 29, wherein the processor is further configured to determine the other rate plans based on the availability of the rate plans offered by the telecommunication service providers in the subscriber's zip code.

68. (New) The system of claim 29, wherein the processor is further configured to process originating_city parameters and originating_state parameters in the call detail data to produce zip code parameters in the calling profile record.

69. (New) The system of claim 68, wherein the processor is further configured to:

group the zip code parameters according to zip codes;

write the zip codes into zip code fields in a descending order based on the service usage amount in each zip code; and

write the percentage of total minutes for each zip code into zip code percentage fields.

70. (New) The system of claim 69, wherein the processor is further configured to write the zip code with the highest percentage into a first zip code field, and, if there are more zip codes than zip code fields remaining, group the zip codes starting with at least the first digit into the remaining zip code fields.

71. (New) The system of claim 70, wherein the zip code fields comprise buckets separated by a home zip code, a corporate zip code, and four alternate zip codes.

72. (New) The system of claim 29, wherein the processor is further configured to utilize a weighting algorithm that gives greater relevance to data from more recent billing months.

73. (New) The system of claim 72, wherein the weighting algorithm is defined by a weighting factor equal to $n + e^{(1-p)}$, where n is greater than or equal to zero and p is the number of billing periods looking back in time in which $p = 1$ for the most recent billing period.

74. (New) The system of claim 29, wherein the processor is further configured to:

- calculate a standard deviation of the parameters of the calling profile record;
- assess the suitability of a data set of the parameters with respect to the total data array based on the standard deviation calculation; and
- exclude unsuitable data sets.

75. (New) The system of claim 74, wherein the processor is configured to exclude data sets outside a 1σ deviation.

76. (New) The system of claim 74, wherein the processor is further configured to perturb the parameters of the calling profile record by 1σ deviation in a positive and negative fashion to determine the suitability of the data sets.

77. (New) The computer readable medium of claim 30, wherein the logic configured to analyze is further configured to utilize the zip code of the subscriber to determine the other rate plans that are available.

78. (New) The computer readable medium of claim 30, wherein the logic configured to process the call detail data to produce the calling profile record further comprises:

logic configured to process originating_city parameters and originating_state parameters in the call detail data to produce zip code parameters in the calling profile record.

79. (New) The computer readable medium of 78, wherein the logic configured to process the call detail data to produce the calling profile record further comprises:

logic configured to group the zip code parameters according to zip codes; and

logic configured to write the zip codes into zip code fields in a descending order based on the amount of minutes for each zip code and to write the percentage of total minutes for each zip code into zip code percentage fields.

80. (New) The computer readable medium of claim 79, wherein the logic configured to process the call detail data to produce the calling profile record is further configured to:

write the zip code with the highest percentage into a first zip code field; and

if there are more zip codes than remaining zip code fields, then group the zip codes starting with the same digits into the remaining zip code fields.

81. (New) The computer readable medium of claim 80, wherein the zip code fields comprise a home zip code, a corporate zip code, and at least one alternate zip code.

82. (New) The computer readable medium of claim 30, wherein the logic configured to analyze the parameters of the calling profile record is further configured to use a weighting algorithm that gives greater relevance to data from more recent billing periods.

83. (New) The computer readable medium of claim 82, wherein the weighting algorithm is defined by a weighting factor equal to $n + e^{(1-p)}$, where n is greater than or equal to zero and p is the number of billing periods looking back in time in which $p = 1$ for the most recent billing period.

84. (New) The computer readable medium of claim 30, wherein the logic configured to analyze the parameters of the calling profile record calculates the standard deviation of the parameters of the calling profile record to assess the suitability of a data set to the total data array, the logic configured to analyze further configured to exclude unsuitable data sets from the total data array.

85. (New) The computer readable medium of claim 84, wherein the logic configured to analyze excludes unsuitable data sets that are outside a 1σ deviation.

86. (New) The computer readable medium of claim 84, wherein the logic configured to analyze the parameters of the calling profile record further comprises:

logic configured to change the calling profile record by 1 σ deviation in a positive and negative fashion to determine the suitability of the data sets.